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10/550,376	02/01/2006	Toshitaka Kawanami	F-8814	7950

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EXAMINER	
RIPA, BRYAN D	

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1795	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/550,376	KAWANAMI ET AL.	
	Examiner	Art Unit	
	BRYAN D. RIPA	1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 September 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *9/20/05; 1/17/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 8, 9, 23 and 24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Specifically, the claims recite several references throughout the claims to the limitations "the acrylic resin" and "the epoxy resin". However, there is insufficient antecedent basis for these limitations in the claims.

2. Claims 16-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

More specifically, claim 16 recites the limitation "contains crosslinked resin particles" in the third line of the claim. However, it is unclear whether the crosslinked resin particles referred to are those mentioned in claim 8, the claim from which it depends, or whether it is referring to other crosslinked resin particles.

If it is applicant's intent to claim the former, the applicant need merely add "the" or "said" prior to the limitation in order to make clear the scope of the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morichika et al., (J.P. Pub. No. 2002-294173) (hereinafter referred to as "MORICHIKA") with reference made to the provided machine translation in view of Aria (J.P. Pub. No. 2002-285077) (hereinafter referred to as "ARIA") with reference to the machine translation and Vigezzi et al., (U.S. Pat. No. 4,915,797) (hereinafter referred to as "VIGEZZI") with evidence from Sakamoto et al., (U.S. Pub. No. 2002/0098363) (hereinafter referred to as "SAKAMOTO") and Lupinski et al., (U.S. Pat. No. 3,850,773) (hereinafter referred to as "LUPINSKI").

Regarding claim 1, MORICHIKA teaches a coating method capable of coating an electric wire having edges (see ¶2 and ¶91 teaching the cationic electrodeposition coating of various metal objects including automobile frames, other various car parts, as well as metal plates) comprising a step of:

- carrying out cationic electrodeposition on a substrate to form an insulating film thereon by using a cationic electrocoating that is stored in an electrocoating bath (see ¶72);
- the cationic electrocoating containing a resin composition of which a hydratable functional group is reduced directly by electrons and passivated, resulting in the deposition of a film (see ¶6 teaching the cationic electrodeposition resin composition having a sulfonium and a propargyl group); and
- the cationic electrocoating containing crosslinked resin particles (see ¶6 teaching the cationic electrodeposition paint containing a bridge construction, i.e. crosslinking (see the abstract), resin particles).

MORICHIKA, however, does not explicitly teach: (1) the substrate to be coated being a square wire; (2) the shifting speed of the square wire in the electrocoating bath being between 1 and 80 m/min; and (3) the shortest distance from the liquid-contact portion of the square wire to an electrode is set longer than ½ of the total shift distance of the square wire from the liquid-contact portion of the square wire to the liquid-separation portion in the electrocoating bath (hereinafter referred to as "the shift distance").

With respect to (1), ARAI, however, teaches the use of a cationic electrocoating method which employs a similar type crosslinked resin particle, i.e. obtained by emulsion polymerization of an α,β-ethylenically unsaturated monomer, to provide a coating on a rectangular electric wire (see ¶14 teaching the same method of forming the crosslinked resin particle).

Furthermore, while MORICHIKA teaches the cationic electrodeposition coating method primarily directed toward automotive applications, MORICHIKA clearly appreciates the application of the electrodeposition coating in other situations (see ¶2 and ¶91 teaching the use of the electrodeposition coating on car bodies and automotive parts; see also ¶70 teaching the article to be coated to not be restricted but applicable to any article that isn't deteriorated by the cathodic electrodeposition or subsequent curing).

Moreover, one of ordinary skill in the art would have been motivated to apply the electrocoating method of MORICHIKA to a square electric wire substrate as claimed. For instance, as taught in ARAI, the use of the crosslinked resin particle of MORICHIKA provides a good coating on the edges of a square wire when undergoing cationic electrodeposition coating (see ¶6 and ¶7 teaching the coating on the square wire being free of pinholes when using the disclosed crosslinking resin particles). Also, as shown by LUPINSKI, the use of insulating polymers to form an insulating layer on wires is well known in the art (see col. 3 lines 39-55). Additionally, as shown by SAKAMOTO, the electrocoating layer of MORICHIKA with its sulfonium groups was known to act as a good insulator (see ¶234).

Thus, one of ordinary skill in the art would have appreciated the fact that the electrocoating method of MORICHIKA could have been applied to a substrate, such as a square wire, to form an insulated wire.

With respect to (2) and (3), VIGEZZI, however, teaches a continuous process for coating a conductor with a protective resin where: (1) the shifting speed of the wire is

between 1 and 80 m/min (see col. 5 lines 21-24 teaching the shift speed being within the range of 40 to 90 ft/min, i.e. from 12 to 27 m/min) and (2) where the shortest distance from the liquid-contact portion of the square wire to an electrode is set longer than ½ of the total shift distance (see figure 1 showing the anode 26, specifically the furthest to the right in the figure, being located so as to be further from the liquid-contact portion of the wire than ½ of the total shift distance).

Consequently, as shown by VIGEZZI, a person of ordinary skill in the art would accordingly have recognized the use of the continuous coating method to facilitate the coating of the square wire as claimed.

Moreover, one of ordinary skill in the art would have been motivated to use the electrocoating bath setup of VIGEZZI because it provides for a continuous method of manufacturing the insulated wire.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to manufacture the insulated wire with the electrocoating setup having the shift speed and electrode placement as taught in VIGEZZI in order to obtain the predictable result of having the wire continuously produced with a shift speed and electrode placement as claimed.

As a result, it would have been obvious to one of ordinary skill in the art at the time of invention to apply the electrocoating process of MORICHIKA to a square wire as taught by ARIA by using an electrodeposition bath with the shift speed and electrode placement as taught by VIGEZZI in order to obtain the method of coating a square wire as claimed.

Regarding claim 2, MORICHIKA teaches the method of coating wherein the crosslinked resin particle is one of which a hydratable functional group is reduced directly by electrons and passivated (see ¶6 teaching the formation of the resin particle by emulsion polymerization of an α,β-ethylenically unsaturated monomer so that it would be reduced and passivated as claimed).

Regarding claim 3, MORICHIKA teaches the method of coating wherein the content of the crosslinked resin particles is between 3 and 20% by weight in the coating (see ¶6).

Regarding claim 4, MORICHIKA teaches the method of coating wherein the crosslinked resin particles are obtained by emulsion polymerization of an α,β-ethylenically unsaturated monomer mixture using a resin having an onium group as an emulsifier (see ¶6 teaching the formation of the crosslinking resin particle as claimed with an acrylic resin having an ammonium group for use as the emulsifier).

Regarding claim 5, MORICHIKA teaches the method of coating wherein the resin having an onium group has 2 to 15 onium groups per one molecule (see ¶7).

Regarding claim 6, MORICHIKA teaches the method of coating wherein the resin having an onium group, is an acrylic resin (see ¶6 and ¶7).

Regarding claim 7, MORICHIKA teaches the method of coating wherein the onium group is an ammonium group (see ¶6 and ¶7).

Regarding claim 8, MORICHIKA teaches the method of coating wherein the acrylic resin having the ammonium group is obtained by adding a tertiary amine compound and an organic acid to the acrylic resin having an epoxy group to convert the acrylic resin to a quaternary ammonium compound (see ¶8).

Regarding claim 9, MORICHIKA teaches the method of coating wherein the number-average molecular weight of the acrylic resin, having an epoxy group, is 5,000-20,000 (see ¶8).

Regarding claim 10, MORICHIKA teaches the method of coating wherein the resin composition has a sulfonium group and a propargyl group (see ¶6).

Regarding claim 11, MORICHIKA teaches the method of coating wherein the resin composition has a sulfonium group content of 5 to 400 millimoles, a propargyl group content of 10 to 495 millimoles and a total content of the sulfonium and propargyl groups of 500 millimoles or less per 100 grams of the solid matter in the resin composition (see ¶9).

Regarding claim 12, MORICHIKA teaches the method of coating wherein the resin composition includes an epoxy resin having a novolak cresol epoxy resin or a novolak phenol epoxy resin as a skeleton and having a number-average molecular weight of 700 to 5,000 and the resin composition also having a sulfonium group content of 5 to 250 millimoles, a propargyl group content of 20 to 395 millimoles and a total content of the sulfonium and propargyl groups of 400 millimoles or less per 100 grams of the solid matter in the resin composition (see ¶9).

Regarding claim 13, MORICHIKA as modified by ARIA and VIGEZZI, as discussed above, would produce an insulated wire having all the structural limitations implied by the process steps.

Claim 13 is being treated as a product-by-process claim. Please note, that the determination of patentability is based upon the apparatus structure itself and not the process by which it is made. The patentability of a product does not depend on its method of production or formation. See MPEP § 2113.

4. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over MORICHIKA in view of ARIA and VIGEZZI as applied to claims 1-13 above, and further in view of Tanaka et al., (U.S. Pat. No. 3,547,788) (hereinafter referred to as "TANAKA").

Regarding claim 14, MORICHIKA as modified by ARIA and VIGEZZI does not explicitly teach the insulated wire being wound in a roll.

However, TANAKA teaches a method of forming insulated wire where the insulated wire is rolled by a winding mechanism (see col. 10 lines 25-27).

Furthermore, it would have been obvious to one of ordinary skill in the art to roll the insulated wire as claimed in order to provide for more convenient storage and shipment.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to roll the insulated wire as claimed.

5. Claims 15-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over MORICHIKA in view of ARIA, Masuda et al., (U.S. Pat. No. 4,647,474) (hereinafter referred to as "MASUDA") and VIGEZZI with evidence from SAKAMOTO and LUPINSKI.

Regarding claim 15, MORICHIKA teaches a coating method capable of coating an electric wire having edges (see ¶2 and ¶91 teaching the cationic electrodeposition coating of various metal objects including automobile frames, other various car parts, as well as metal plates) comprising a step of:

- forming a first insulating film by cationic electrodeposition using a cationic electrocoating (see ¶72);

- the cationic electrocoating containing a resin composition of which a hydratable functional group is reduced directly by electrons and passivated, resulting in the deposition of a film (see ¶6 teaching the cationic electrodeposition resin composition having a sulfonium and a propargyl group); and
- the cationic electrocoating containing crosslinked resin particles (see ¶6 teaching the cationic electrodeposition paint containing a bridge construction, i.e. crosslinking (see the abstract), resin particles).

MORICHIKA, however, does not explicitly teach: (1) the substrate to be coated being a square wire; (2) the shifting speed of the square wire in the electrocoating bath being between 1 and 80 m/min; (3) the shortest distance from the liquid-contact portion of the square wire to an electrode is set longer than ½ of the total shift distance; and (4) the forming of a second insulating film on the first insulating film when the substrate is a square wire.

With respect to (1), ARAI, however, teaches the use of a cationic electrocoating method which employs a similar type crosslinked resin particle, i.e. obtained by emulsion polymerization of an α,β-ethylenically unsaturated monomer, to provide a coating on a rectangular electric wire (see ¶14 teaching the same method of forming the crosslinked resin particle).

Furthermore, while MORICHIKA teaches the cationic electrodeposition coating method primarily directed toward automotive applications, MORICHIKA clearly appreciates the application of the electrodeposition coating in other situations (see ¶2 and ¶91 teaching the use of the electrodeposition coating on car bodies and automotive

parts; see also ¶70 teaching the article to be coated to not be restricted but applicable to any article that isn't deteriorated by the cathodic electrodeposition or subsequent curing).

Moreover, one of ordinary skill in the art would have been motivated to apply the electrocoating method of MORICHIKA to a square electric wire substrate as claimed. For instance, as taught in ARAI, the use of the crosslinked resin particle of MORICHIKA provides a good coating on the edges of a square wire when undergoing cationic electrodeposition coating (see ¶6 and ¶7 teaching the coating on the square wire being free of pinholes when using the disclosed crosslinking resin particles). Also, as shown by LUPINSKI, the use of insulating polymers to form an insulating layer on wires is well known in the art (see col. 3 lines 39-55). Additionally, as shown by SAKAMOTO, the electrocoating layer of MORICHIKA with its sulfonium groups was known to act as a good insulator (see ¶234).

Thus, one of ordinary skill in the art would have appreciated the fact that the electrocoating method of MORICHIKA could have been applied to a substrate, such as a square wire, to form an insulated wire.

With respect to (2) and (3), VIGEZZI, however, teaches a continuous process for coating a conductor with a protective resin where: (1) the shifting speed of the wire is between 1 and 80 m/min (see col. 5 lines 21-24 teaching the shift speed being within the range of 40 to 90 ft/min, i.e. from 12 to 27 m/min) and (2) where the shortest distance from the liquid-contact portion of the square wire to an electrode is set longer than ½ of the total shift distance (see figure 1 showing the anode 26, specifically the

anode furthest to the right in the figure, being located so as to be further from the liquid-contact portion of the wire than ½ of the total shift distance).

Consequently, as shown by VIGEZZI, a person of ordinary skill in the art would accordingly have recognized the use of the continuous coating method to facilitate the coating of the square wire as claimed.

Moreover, one of ordinary skill in the art would have been motivated to use the electrocoating bath setup of VIGEZZI because it provides for a continuous method of manufacturing the insulated wire.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to manufacture the insulated wire with the electrocoating setup having the shift speed and electrode placement as taught in VIGEZZI in order to obtain the predictable result of having the wire continuously produced with a shift speed and electrode placement as claimed.

With respect to (4), MASUDA teaches the use of a cationic electrodeposition coating method for depositing an insulating coating on a wire comprising the forming of a second insulating film on top of the first insulating film (see col. 7 lines 1-26).

Consequently, as shown by MASUDA, a person of ordinary skill in the art would accordingly have recognized that a second insulating film could be applied on top of the first as required.

Furthermore, while not speaking specifically of insulated wires, MORICHIKA recognized the possibility of applying additional coatings as required for the article's intended purpose (see ¶75 teaching the use of subsequent coatings to give better chip

resistance and appearance). In making insulating coatings for wires, MASUDA also teaches the option of a second insulating layer being formed on the wire in order to obtain the desired characteristics for the wire (see col. 7 lines 1-14; 17-26; see also figure 4).

Additionally, just as the initial layer is desired to provide an insulating barrier with as high a dielectric strength as possible, it would also have been obvious to one of ordinary skill in the art that adding another layer would further increase the dielectric strength, since it is well known in the art that the dielectric strength of a material is directly proportional to its thickness. Thus, by increasing the thickness of the combined insulating layers, i.e. by the addition of a second layer, the insulating effect would have been increased.

In light of these teachings, one of ordinary skill in the art would have been motivated to add an additional insulating layer, i.e. a second insulating film, on top of the first in order to provide for an electric wire having improved durability. Thus, one of ordinary skill in the art would have appreciated that an additional insulating layer could be applied on top of the first insulating layer in order to form an insulated wire having a second insulating layer on top of the first insulating layer as claimed.

As a result, it would have been obvious to one of ordinary skill in the art at the time of invention to apply the electrocoating process of MORICHIKA to a square wire as taught by ARIA by using an electrodeposition bath with the shift speed and electrode placement as taught by VIGEZZI and having a second insulating film deposited on the

first as taught by MASUDA in order to obtain the method of coating a square wire as claimed.

Regarding claim 16, MORICHIKA teaches the method of coating wherein the cationic electrocoating contains the crosslinked resin particles (see ¶6 teaching the cationic electrodeposition paint containing a bridge construction, i.e. crosslinking (see the abstract), resin particles).

Regarding claim 17, MORICHIKA teaches the method of coating wherein the crosslinked resin particle is one of which a hydratable functional group is reduced directly by electrons and passivated (see ¶6 teaching the formation of the resin particle by emulsion polymerization of an α,β-ethylenically unsaturated monomer so that it would be reduced and passivated as claimed).

Regarding claim 18, MORICHIKA teaches the method of coating wherein the content of the crosslinked resin particles is between 3 and 20% by weight in the coating (see ¶6).

Regarding claim 19, MORICHIKA teaches the method of coating wherein the crosslinked resin particles are obtained by emulsion polymerization of an α,β-ethylenically unsaturated monomer mixture using a resin having an onium group as an

emulsifier (see ¶6 teaching the formation of the crosslinking resin particle as claimed with an acrylic resin having an ammonium group for use as the emulsifier).

Regarding claim 20, MORICHIKA teaches the method of coating wherein the resin having an onium group has 2 to 15 onium groups per one molecule (see ¶7).

Regarding claim 21, MORICHIKA teaches the method of coating wherein the emulsifier, i.e. the resin having an onium group, is an acrylic resin (see ¶6 and ¶7).

Regarding claim 22, MORICHIKA teaches the method of coating wherein the onium group is an ammonium group (see ¶6 and ¶7).

Regarding claim 23, MORICHIKA teaches the method of coating wherein the acrylic resin having the ammonium group is obtained by adding a tertiary amine compound and an organic acid to the acrylic resin having an epoxy group to convert the acrylic resin to a quaternary ammonium compound (see ¶8).

Regarding claim 24, MORICHIKA teaches the method of coating wherein the number-average molecular weight of the acrylic resin, having an epoxy group, is 5,000-20,000 (see ¶8).

Regarding claim 25, MORICHIKA teaches the method of coating wherein the resin composition has a sulfonium group and a propargyl group (see ¶6).

Regarding claim 26, MORICHIKA teaches the method of coating wherein the resin composition has a sulfonium group content of 5 to 400 millimoles, a propargyl group content of 10 to 495 millimoles and a total content of the sulfonium and propargyl groups of 500 millimoles or less per 100 grams of the solid matter in the resin composition (see ¶9).

Regarding claim 27, MORICHIKA teaches the method of coating wherein the resin composition includes an epoxy resin having a novolak cresol epoxy resin or a novolak phenol epoxy resin as a skeleton and having a number-average molecular weight of 700 to 5,000 and the resin composition also having a sulfonium group content of 5 to 250 millimoles, a propargyl group content of 20 to 395 millimoles and a total content of the sulfonium and propargyl groups of 400 millimoles or less per 100 grams of the solid matter in the resin composition (see ¶9).

Regarding claim 28, MORICHIKA as modified by ARIA, VIGEZZI and MASUDA, as discussed above, would produce an insulated wire having all the structural limitations implied by the process steps.

Claim 28 is being treated as a product-by-process claim. Please note, that the determination of patentability is based upon the apparatus structure itself and not the

process by which it is made. The patentability of a product does not depend on its method of production or formation. See MPEP § 2113.

6. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over MORICHIKA in view of ARIA and VIGEZZI as applied to claims 15-28 above, and further in view of TANAKA.

Regarding claim 29, MORICHIKA as modified by ARIA and VIGEZZI does not explicitly teach the insulated wire being wound in a roll.

However, TANAKA teaches a method of forming insulated wire where the insulated wire is rolled by a winding mechanism (see col. 10 lines 25-27).

Furthermore, it would have been obvious to one of ordinary skill in the art to roll the insulated wire as claimed in order to provide for more convenient storage and shipment.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to roll the insulated wire as claimed.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. Claims 1-14 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-13 of copending Application No. 10/555,567 (hereinafter referred to as "the '567 application") in view of VIGEZZI.

The '566 application does not claim the shifting speed of the wire in the electrocoating bath being between 1 and 80 m/min. Also, the '566 application does not claim the limitation regarding the placement of the electrode in relation to the wire entrance and exit from the electrocoating solution.

However, VIGEZZI teaches a continuous process for coating a conductor with a protective resin where: (1) the shifting speed of the wire is between 1 and 80 m/min

(see col. 5 lines 21-24 teaching the shift speed being within the range of 40 to 90 ft/min, i.e. from 12 to 27 m/min) and (2) where the shortest distance from the liquid-contact portion of the square wire to an electrode is set longer than ½ of the total shift distance (see figure 1 showing the anode 26, specifically the one on the right-hand side of the figure, being located so as to further from the liquid-contact portion of the wire than ½ of the total shift distance).

Consequently, as shown by VIGEZZI, a person of ordinary skill in the art would accordingly have recognized the use of the continuous coating method to facilitate the continuous coating of the claimed wire in the '566 application.

Moreover, one of ordinary skill in the art would have been motivated to use the electrocoating bath setup of VIGEZZI because it provides for a continuous method of manufacturing the insulated wire.

Therefore, it would have been obvious to one of ordinary skill in the art to claim the process of the '566 application having the shift speed and electrode placement as taught in VIGEZZI in order to obtain the predictable result of having the wire continuously produced as claimed.

This is a provisional obviousness-type double patenting rejection.

8. Claim 15-29 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 8-21 of copending Application No. 10/555,566 (hereinafter referred to as "the '566 application") in view of VIGEZZI.

The '566 application does not claim the shifting speed of the wire in the electrocoating bath being between 1 and 80 m/min. Also, the '566 application does not claim the limitation regarding the placement of the electrode in relation to the wire entrance and exit from the electrocoating solution.

However, VIGEZZI teaches a continuous process for coating a conductor with a protective resin where: (1) the shifting speed of the wire is between 1 and 80 m/min (see col. 5 lines 21-24 teaching the shift speed being within the range of 40 to 90 ft/min, i.e. from 12 to 27 m/min) and (2) where the shortest distance from the liquid-contact portion of the square wire to an electrode is set longer than ½ of the total shift distance (see figure 1 showing the anode 26, specifically the one on the right-hand side of the figure, being located so as to further from the liquid-contact portion of the wire than ½ of the total shift distance).

Moreover, one of ordinary skill in the art would have been motivated to use the electrocoating bath setup of VIGEZZI because it provides for a continuous method of manufacturing the insulated wire.

Therefore, it would have been obvious to one of ordinary skill in the art to claim the process of the '566 application having the shift speed and electrode placement as taught in VIGEZZI in order to obtain the predictable result of having the wire continuously produced as claimed.

This is a provisional obviousness-type double patenting rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRYAN D. RIPA whose telephone number is 571-270-7875. The examiner can normally be reached on Monday to Friday, 9:00 AM to 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alexa Neckel can be reached on 571-272-1446. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Harry D Wilkins, III/
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/B. D. R./
Examiner, Art Unit 1795